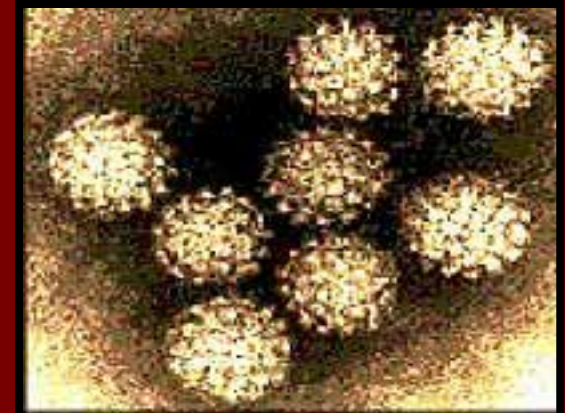
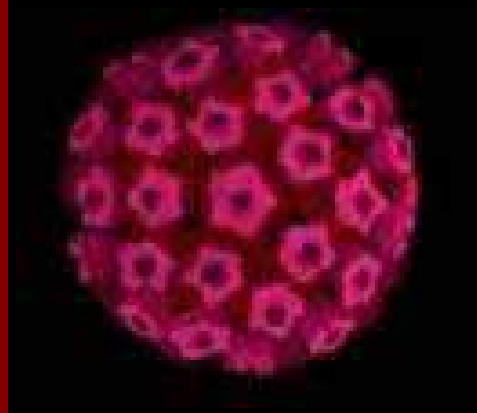
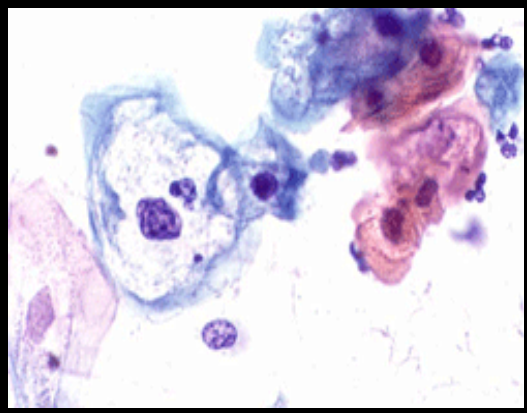


# Understanding Human Papilloma Virus



Presented by:

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Southtown Women's Health Care, Kansas City, MO

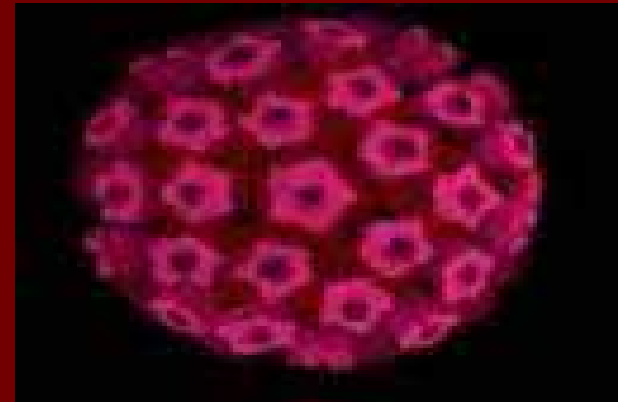
Greater Kansas City Black Nurses Association, President

# Objective

- To define HPV, identify some causes, transmission and treatment.
- Discuss the relationship between HPV and Cervical Cancer
- Discuss current biotechnology for detecting HPV and guideline for management.
- Relate the significance of HPV testing in women

# What is Human Papilloma Virus?

- A group of closed-circular double-stranded DNA viruses
- A virus that infects the skin
- > 100 distinct site-specific types
- Approximately 40 types are sexually transmitted



# Prevalence of HPV



- One of the most common STD in the U.S.
- It is estimated that 75% or more sexually active Americans will contract HPV in their lifetime
- At any one time about 20 million people are infected, have no visible symptoms
- Young people aged 15-24 account for nearly 75% of all new infections every year
- Persistent HPV occurs most often in women under 30

# How is HPV transmitted?



- Sexually
- Through contact with infected genital skin, mucous membranes, or bodily fluids with or without visible s/s
- Genital HPV has not been known spread to other parts of the body, but....
- Possible manual-genital and non-penetrative genital-genital contact

# HPV Risk Factors

- Sexually active before age 20
- Multiple partners
- A partner who has multiple partners
- Unprotected sexual contact
- Compromised immune system

## Factors That Can Decrease Risk of HPV

- Long-term monogamy
- Limiting number of sexual partners
- Condom use
- A circumcised partner
- Being with males who have periods of abstinence
- Non-smoker

# How to Prevent HPV?

Abstain

from all sexual contact including:

- Fondling
- rubbing genital/genital

Is There a Cure for HPV?

**NO NO NO**

HPV viruses have no  
cure

# HPV is Treatable

- Most HPV viruses are suppressed by a healthy immune system
- Genital warts (condolomata acuminata) on the vaginal introitus, vulva, perineum and anal and the cervix can be treated
- Though usually harmless, High risk cervical HPV (treatable) is linked to cervical cancer

# HPV in Males

- Detected clinically-visual inspection
- No reliable High Risk HPV test available (poor cell sample -inconsistent results )
- Not linked to great health risk
- No treatment (if partner is HPV +)



# How Will I Know I Have HPV?

Genital HPV may produce

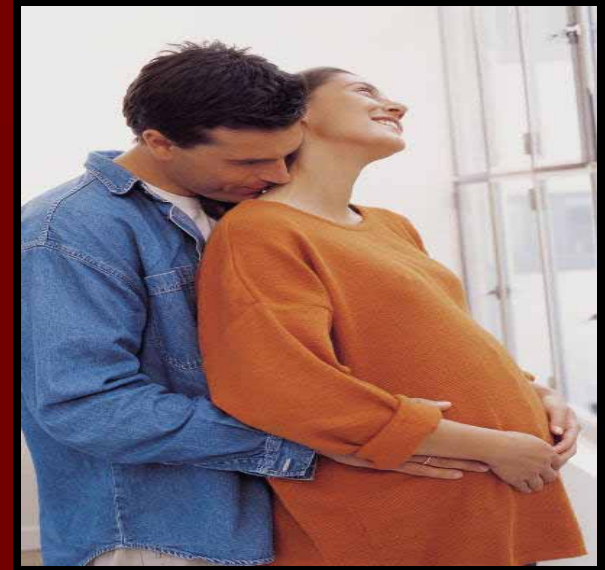
- warts
- lesions
- cervical abnormalities

soon after exposure or  
over after a latent period  
of months and even years



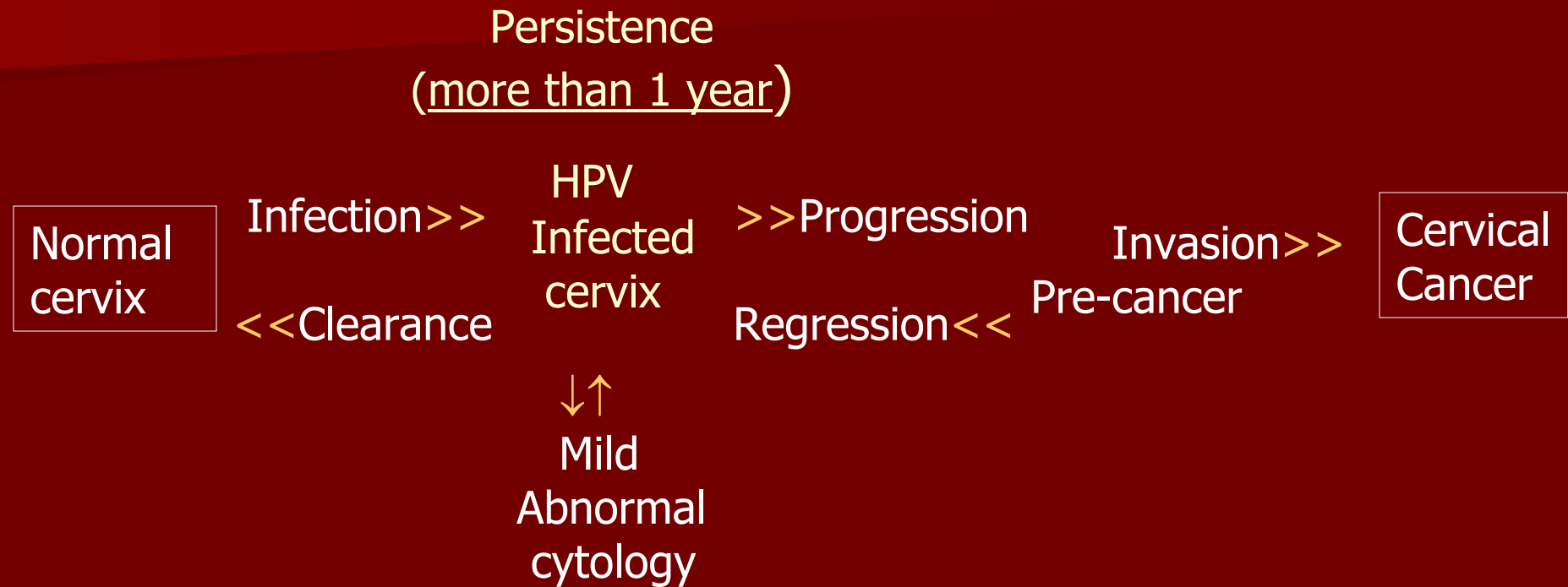
# How will HPV effect my Pregnancy?

- Most women with HPV or genital warts are unlikely to have any HPV-related complication during pregnancy or childbirth
- Rarely infants exposed to HPV may develop warty growths in the throat (laryngeal papillomatosis)
- C-section is not useful in preventing transmission
- Treatment is usually delayed until postpartum



**What is the relationship of HPV  
and Cervical Cancer?**

# Natural History of Cervical Cancer



M. Schiffman, American Society of Colposcopy and Cervical Pathology 2002

# Current Technology for Detecting HPV



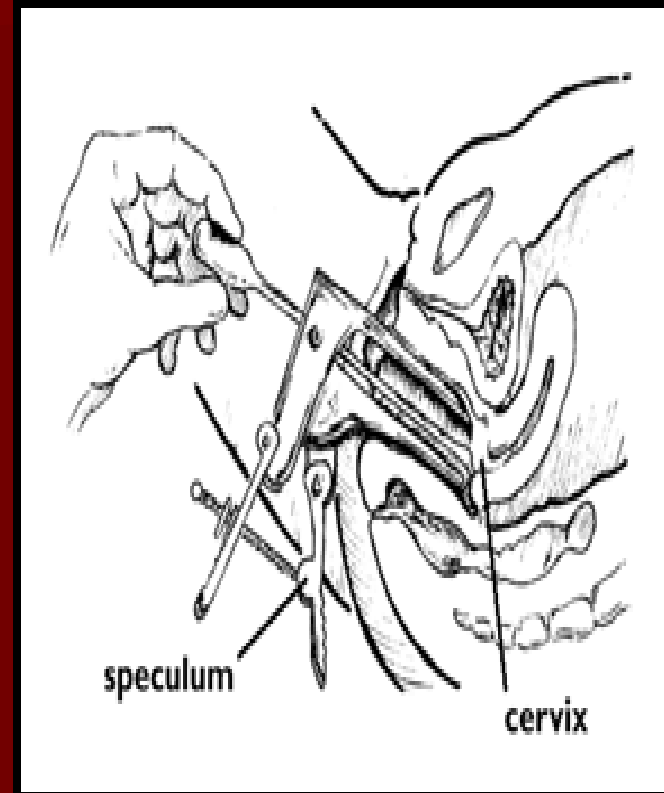
# The HPV Test

How is the HPV test done?

When is the HPV test useful?

# How is HPV Diagnosed?

- Clinical (genital warts)
- Cytology
  - Pap smear (conventional)  
Liquid based (Thin Prep ®)
- Virological (used with pap)
  - DNA Probe (Reflex HPV) Hybrid capture II (DNA with HPV test)  
Digene HPV Test ® not a pap



# Classification System for Pap Results

| Classification System | Degree of Severity   | Explanation   |
|-----------------------|--|---|
| Bethesda              | ASC-US (Atypical Squamous Cell of Undetermined Significance) | Looks borderline between normal and abnormal- often not HPV related |
|                       | ASC-H (Atypical Squamous Cells cannot exclude HSIL)          | Borderline results, but may really include high grade lesions       |
|                       | LSIL (Low Grade SIL)<br><br>HSIL (High Grade SIL)            | SIL (Squamous Intraepithelial Lesion)                               |

# ASCUS HPV DNA test Category

## Low Risk

does not cause  
cervical cancer,  
associated with  
genital warts  
HPV6, HPV11

## High Risk

13 HPV type  
associated as a  
necessary cause to  
cell changes leading  
to cancer over time  
HPV16, HPV18

# Guidelines for HPV Management

# ALTS (ASCUS/LSIL) Triage Study

- Clinical Trial of 5,000 women in the U.S. funded by NCI from 1996-2000
- To find the best way to manage mildly abnormal (ASCUS and ASC-H) results

## ALTS (ASCUS/LSIL) Triage Study

- Among women with ASCUS, HPV testing was highly sensitive in detecting the underlying abnormalities that are at risk for progressing cervical cancer
- HPV testing identified 96% of CIN2 or CIN3 lesions among women with an ASCUS pap test.
- Women with LSIL -- limits the usefulness of HPV testing

# ALTS (ASCUS/LSIL) Triage Study

HPV DNA testing is a viable option for  
management of ASCUS

Recommended by ACOG and ACS:

- Primary screening tool
- Triage of mild pap abnormalities
- Test of cure following treatment of pre-malignant lesions

## When to use the HPV DNA test?

U.S. FDA approved HPV DNA testing with cytology for primary cervical cancer screening for:

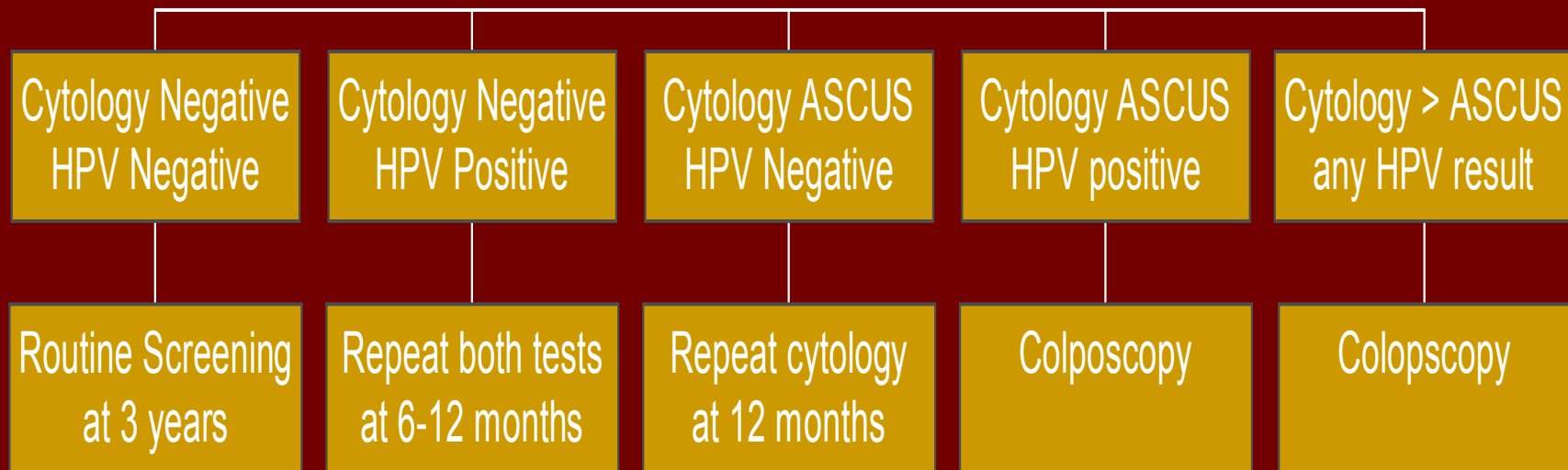
- As F/U test if the pap result is borderline between normal and abnormal Atypical squamous cells or ASC-US
- As a cervical Cancer screening test in combination with a pap test for women at or over age 30.

## When is a HPV test not used?

- If the pap result shows dysplasia or precancerous changes (these cell changes are almost always associated with HPV)
- Women under 30 unless they have an ASC-US pap test result
- The HPV test is not approved for use with males (only female cervix)

# Algorithm for Management of Pap and HPV DNA Testing

Results obtained on cytology and HPV DNA testing



# New Recommendation in HPV Management

- Women 30 with normal pap and HPV negative no pap, up to 3 years
- Women will continue to need annual for other health monitoring  
(breast exam, STD screening, blood work, family planning contraception management)



# Future Treatment of HPV

## HPV Vaccine Clinical Trials Study

- Prophylactic- to prevent cervical HPV
- Therapeutic- to treat cervical HPV

# Cervical Cancer

- Study as shown that HPV is present in 99.7% of cervical cancer
- It is estimated 10,370 women in the U. S. will be diagnosed invasive cervical cancer
- 3,710 women will die from invasive cervical cancer

# Cervical Cancer Prevalence/Mortality Rates in U. S.

## African American Women

- 5th most frequent diagnosis
- 5th cause of death

## Hispanic Women

- 4th most frequent diagnosis
- Does not rank higher than 5th as cause of death

Based on the data from the National Center for Health Statistics

# Reasons for No Change from Diagnosis to Death Regarding Cervical Cancer in AA Women?

- Poor health care accessibility
- Lack of understanding of preventive care
- Lack of early detection and F/U care



# What can be done to effective the prevalence of HPV and Cervical Cancer Mortality rate in AA women?

- Education of HPV
- Routine pap screenings with HPV testing as indicated by guidelines and clinical judgment



# HPV Facts

# HPV Facts

- Most common STI
- Prevalent in teens and young adults
- Condoms are little to no use in prevention
- No current diagnosing tool for male (only visual inspection)

# HPV Facts

- Cervical HPV has no clinical signs
- Proven as a necessary precursor to cervical Cancer
- Cervical cancer lesion develop over extended periods of time

# HPV Facts

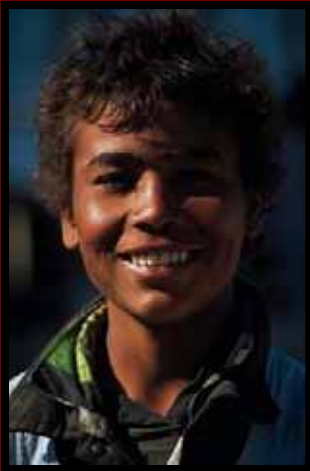
- Women, 30 and older are more likely to have persistent HPV
- Persistent HPV causes Cervical Cancer
- AA women die from Cervical/Uteri Cancer than any other race

# HPV- Early detection and Treatment

- HPV DNA testing is a vital tool in identifying women with persistent HPV infection
- Early detection > Early treatment > prevention
- Treatment of pre-cancerous lesions decrease risk of return for several years

# Why High Risk HPV early detection and management?

Improve Healthy Living



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